

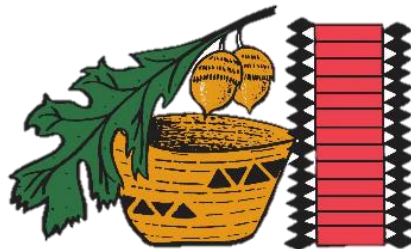


GIS for Tribes

Tuolumne Me-Wuk Story

Dore A. Bietz, Assistant Planner/Emergency Manager

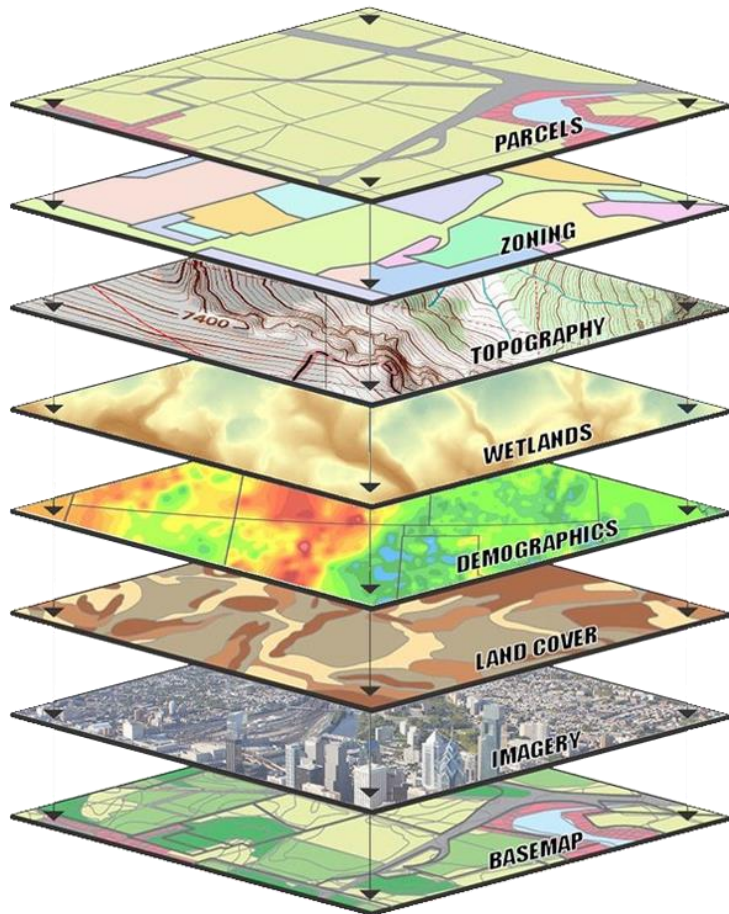
Tuolumne Band of Me-Wuk Indians



2018 California Tribal Water Summit
April 4-5, 2018



What is GIS?



A Geographic Information System (GIS) is a SYSTEM that allows you to collect, analyze, store, and view INFORMATION (data), in a geographic way; i.e. MAPS

In doing so we better understand relationships, patterns, and trends

GIS benefits organizations of all types (federal, state, local, tribal, and private), of all sizes, and in every industry



If it Exists, Existed, or Could Exist ***IT CAN BE MAPPED!***

Infrastructure

Current & Future Transportation
Water, Power, Sewer Lines
Communications
Tribal Facilities & Housing
Regional Facilities

Public Safety

Fire, Law, and EMS
Resources & Response Areas
Fire Hydrants, Fuels Breaks, etc
Hazards (Fire, Floods, Drought)
Response & Evacuation Plans

Cultural

Cemeteries & Burials Sites
Hunting, Gathering, etc Sites
Villages & Other Cultural Sites
Historic Areas & Routes

Environmental

Vegetation Management
Conservation and Restoration
Fuels Reduction
Bark Beetles
Species Monitoring
Water Quality Testing
Geology, Soils, Mines, etc

Hydrology / Water Rights

Rivers, Creeks, & Ditches
Lakes, Reservoirs, & Dams
Watersheds (macro & micro)
Springs, Meadows, and Marshes
Water Rights

Property & Boundaries

Tribal Lands/Tracts (Trust & Fee)
Assignments & Allotments
Fee to Trust Transfers
USFS, BLM, NPS, etc Property
County Parcel Data
Local Government Districts

Planning & Expansion

Tribal General Planning
County Planning & Zoning
Project Specific Planning
Commercial & Residential Expansion
Special Events



Geographic INFORMATION Systems

It's Not Just "Mapping"...

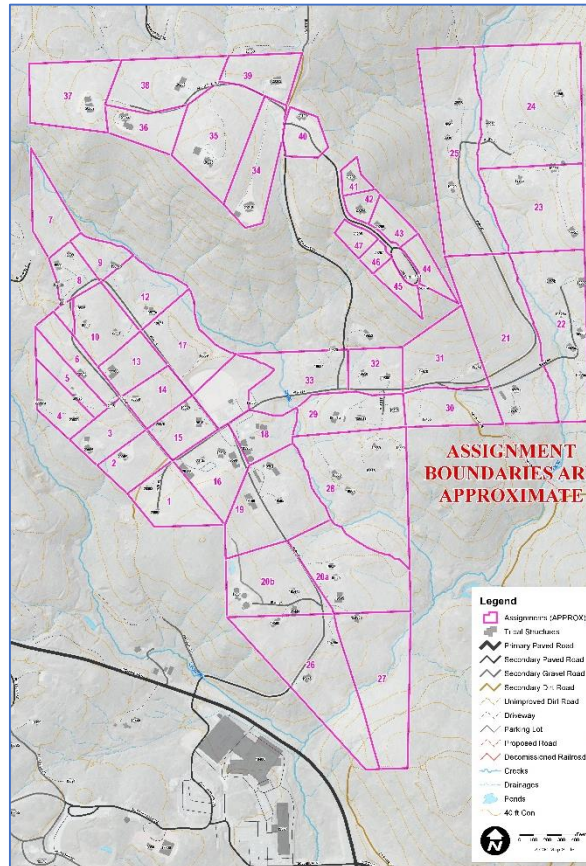
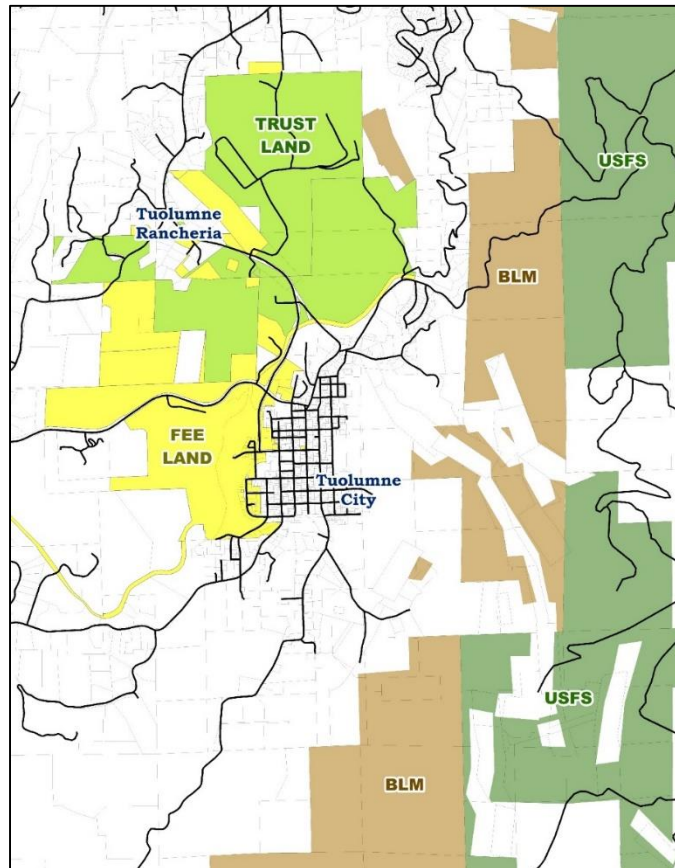


*Accurate and Accessible INFORMATION
about our PAST and PRESENT, allows us to better understand
our world, and paves the way for intelligent and informed
decision making about our FUTURE...*



PROPERTY & PLANNING

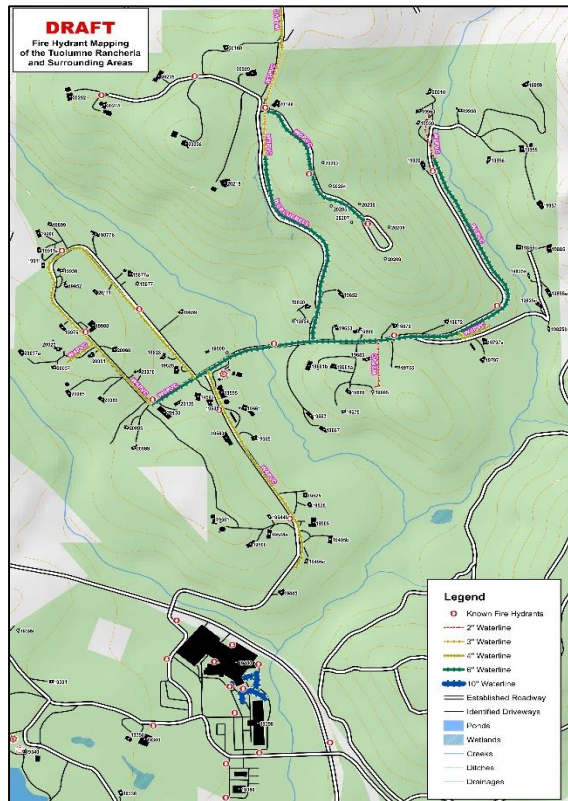
Land Ownership



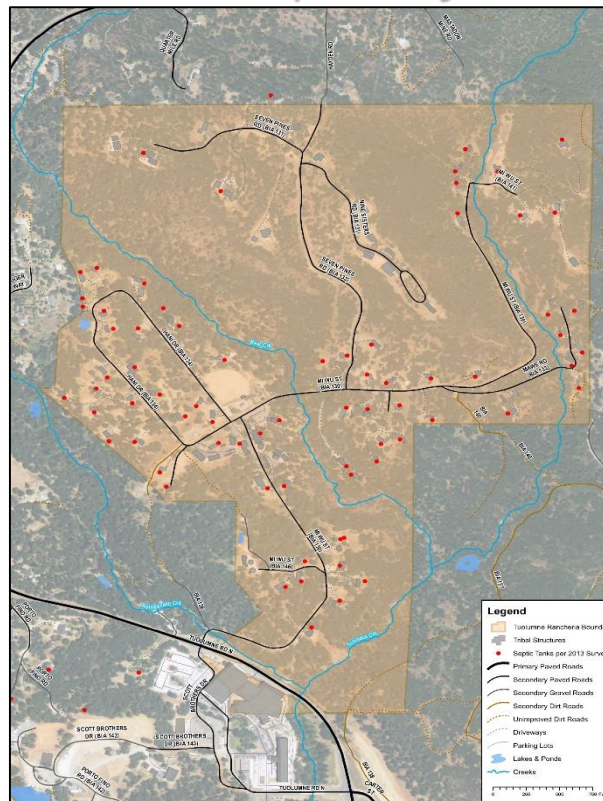


PROPERTY & PLANNING

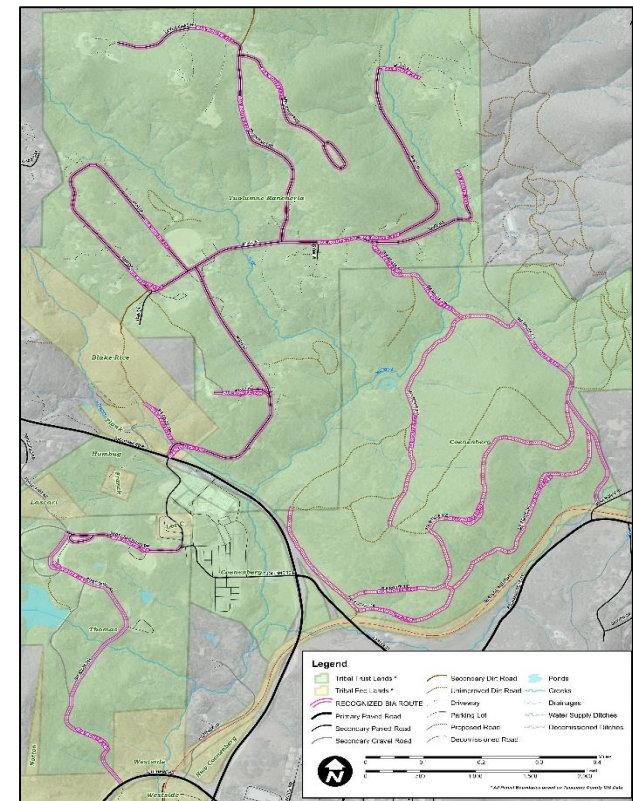
Land Ownership & Infrastructure



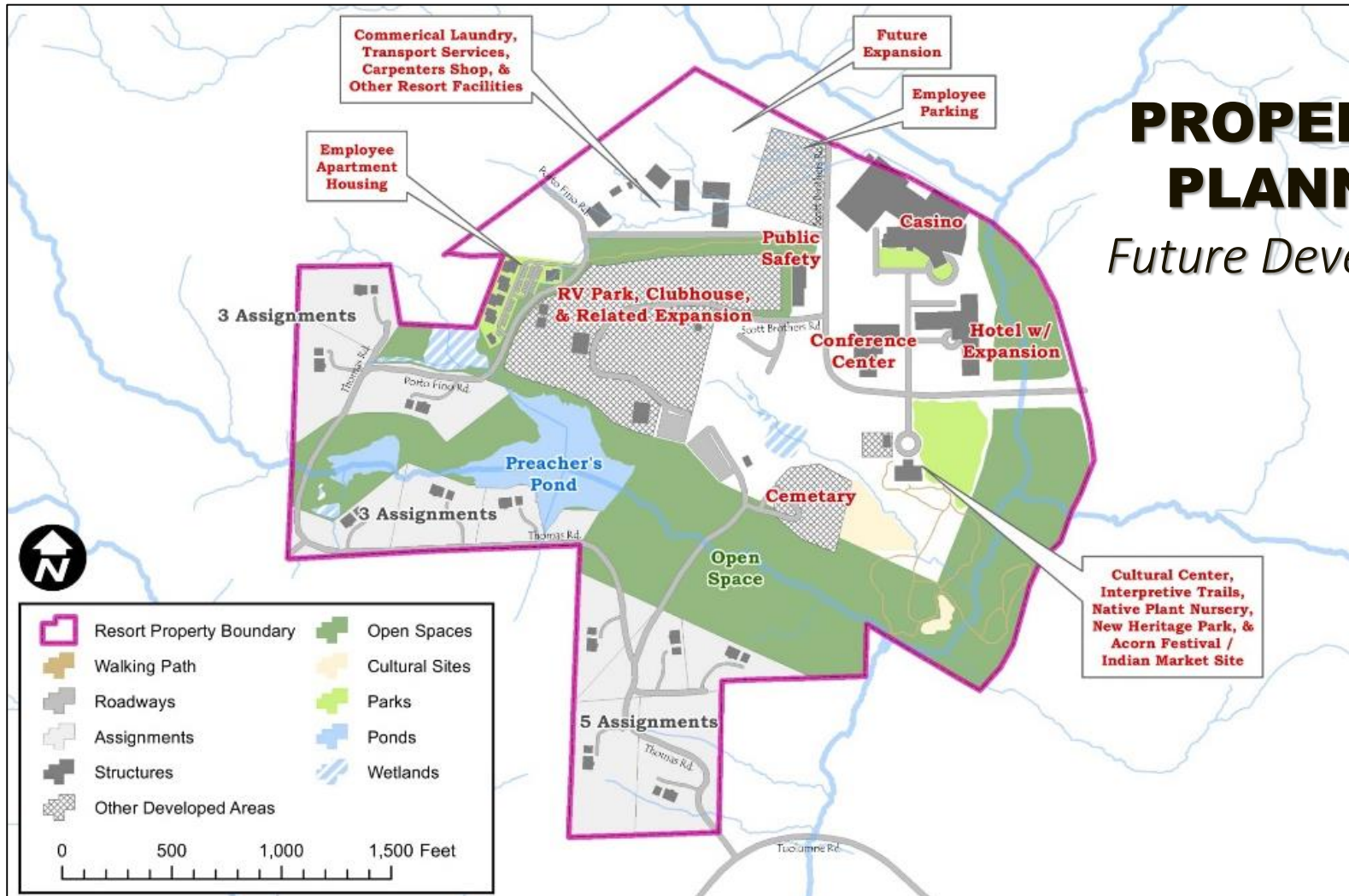
WATER LINES



SEPTIC TANKS

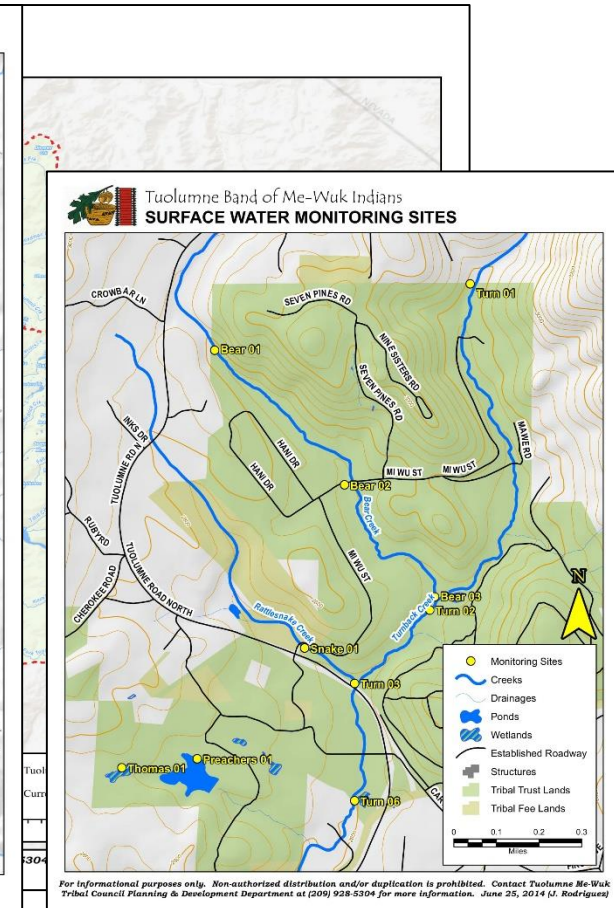
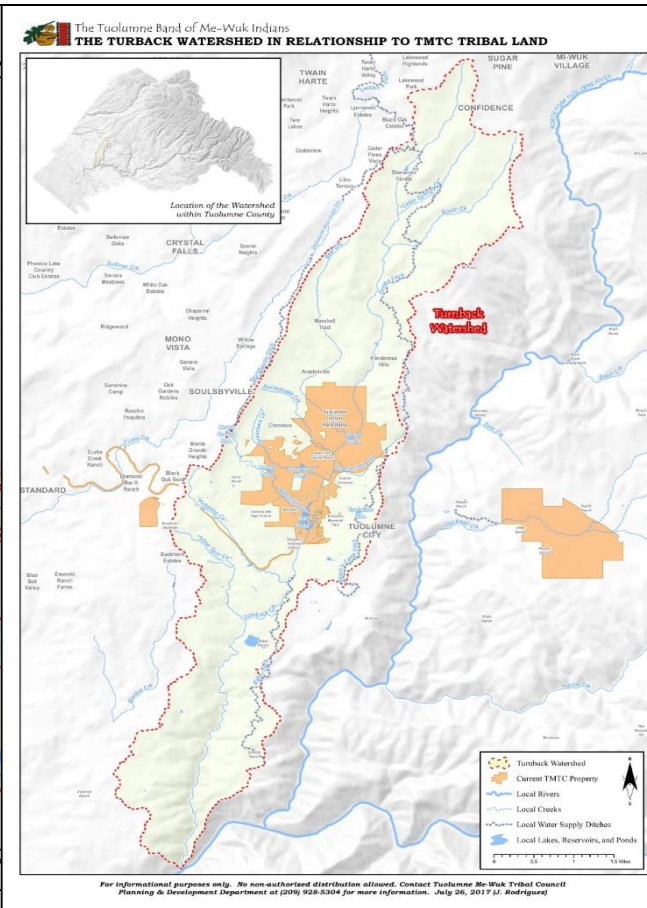


TRANSPORTATION





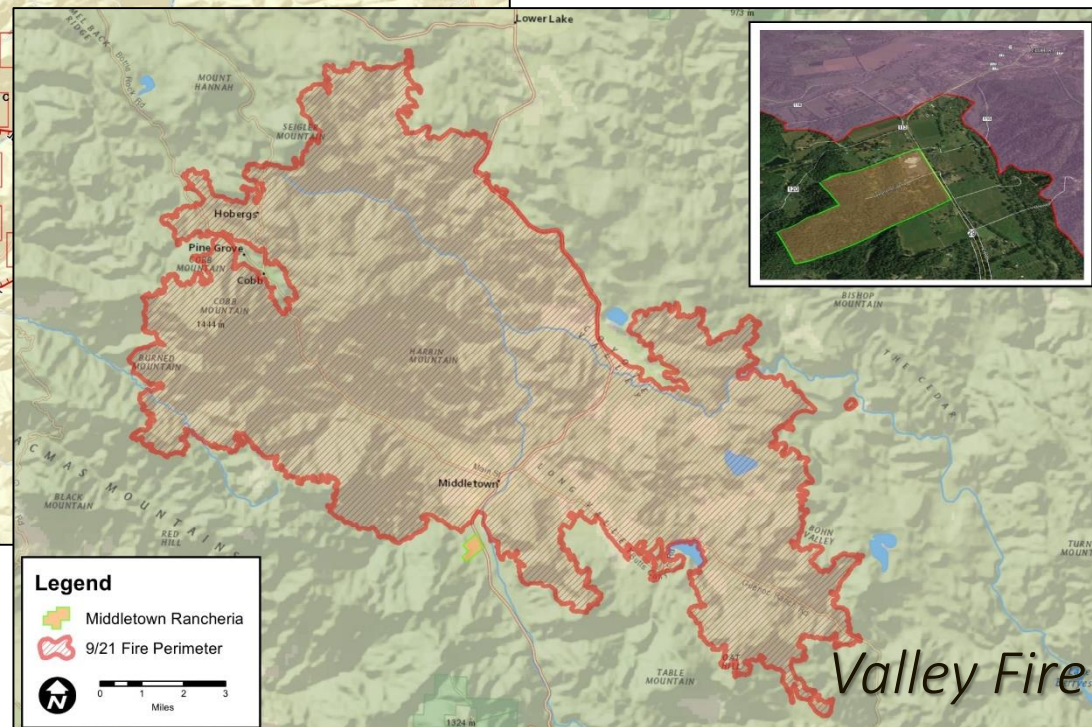
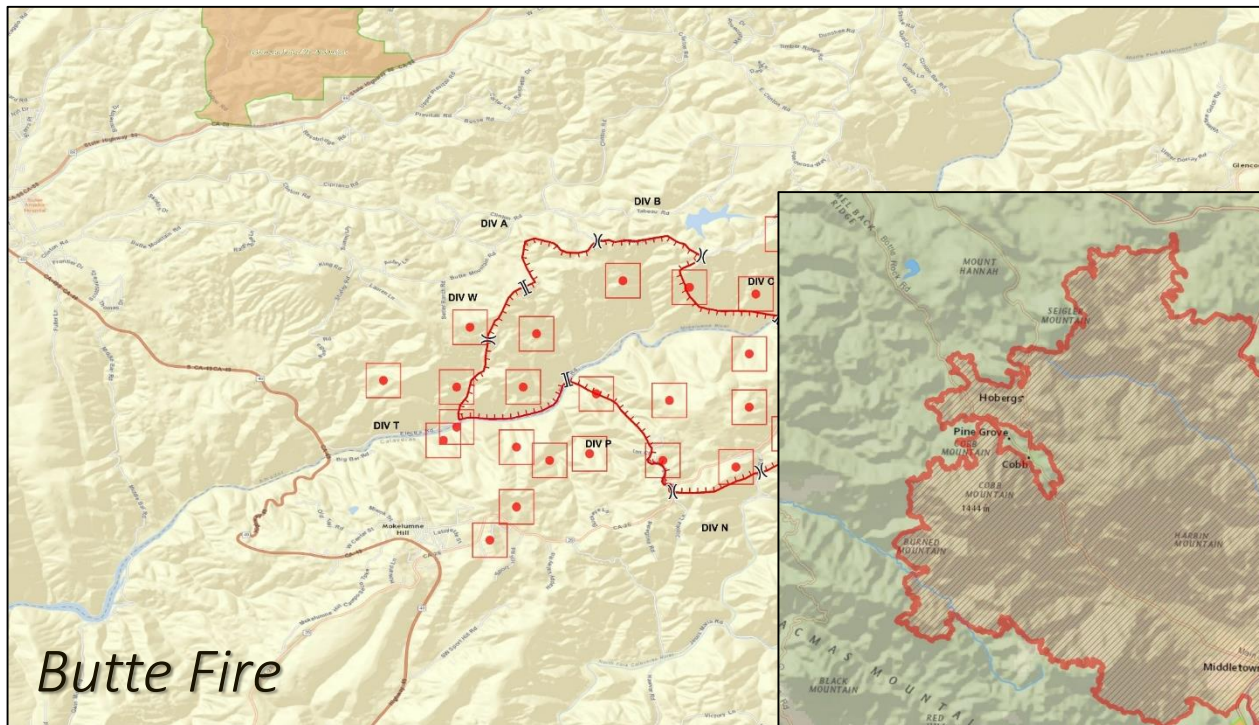
Identifying Waterways, Watersheds, & Water Rights





PUBLIC SAFETY

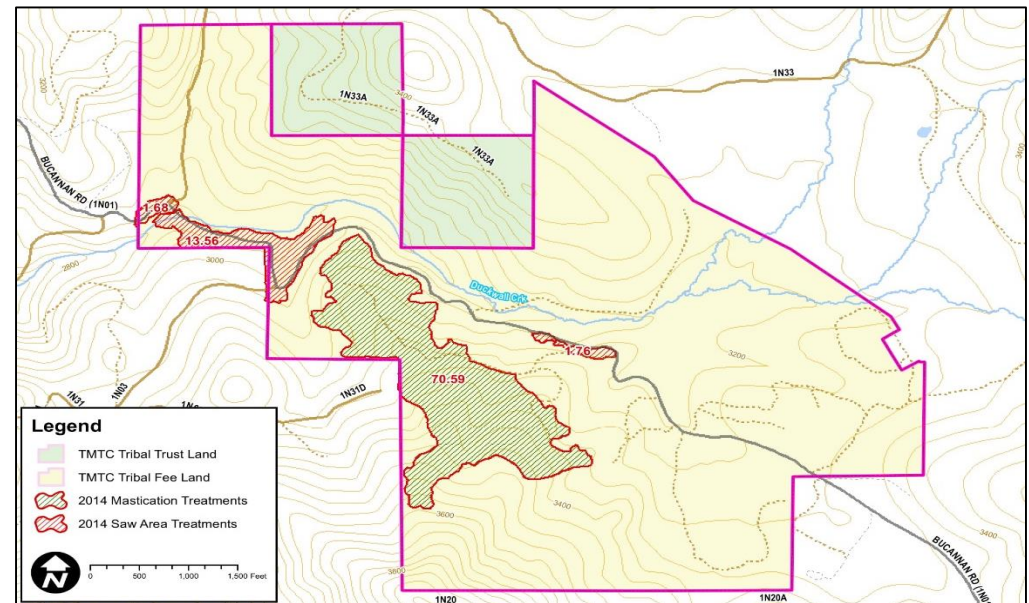
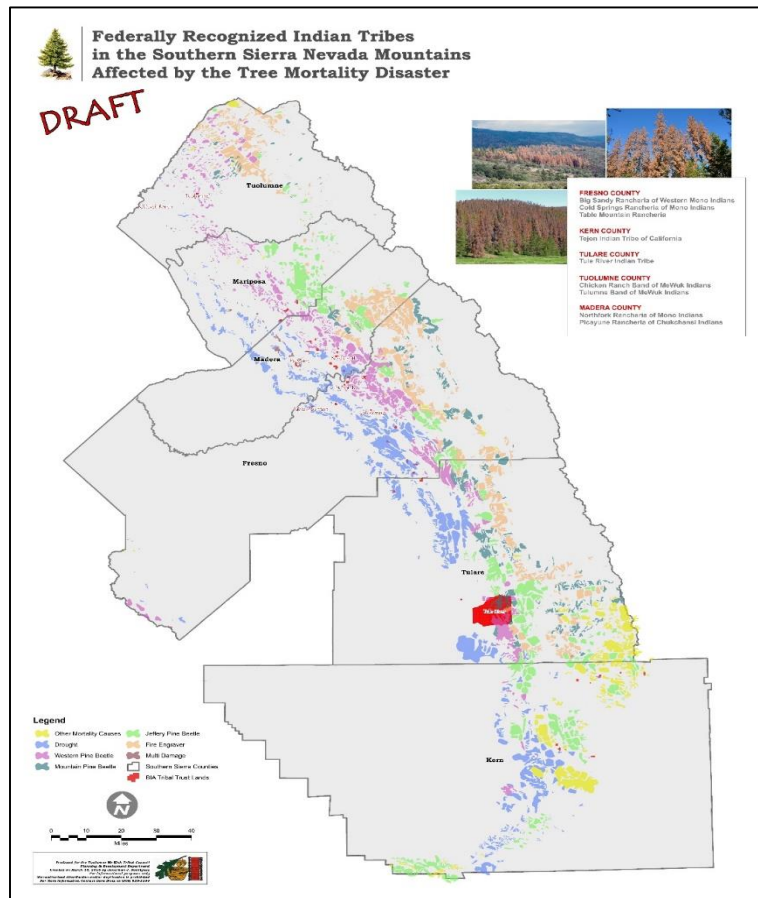
Emergency Incidents - Fire





PUBLIC SAFETY

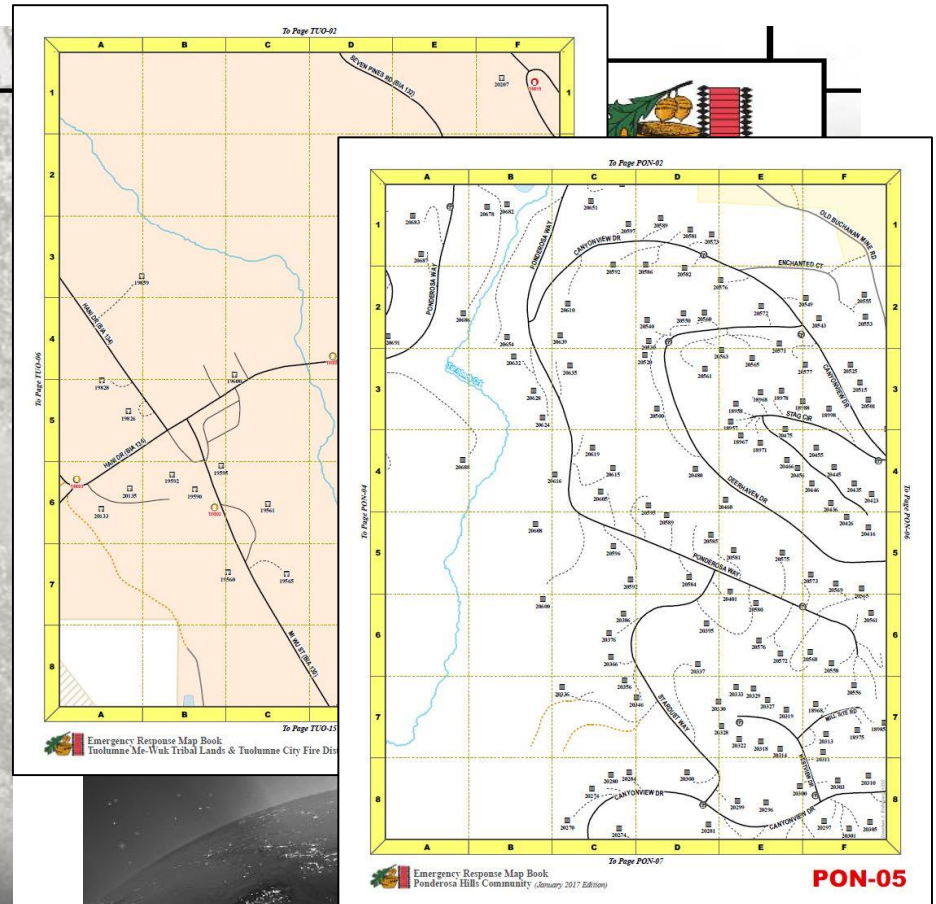
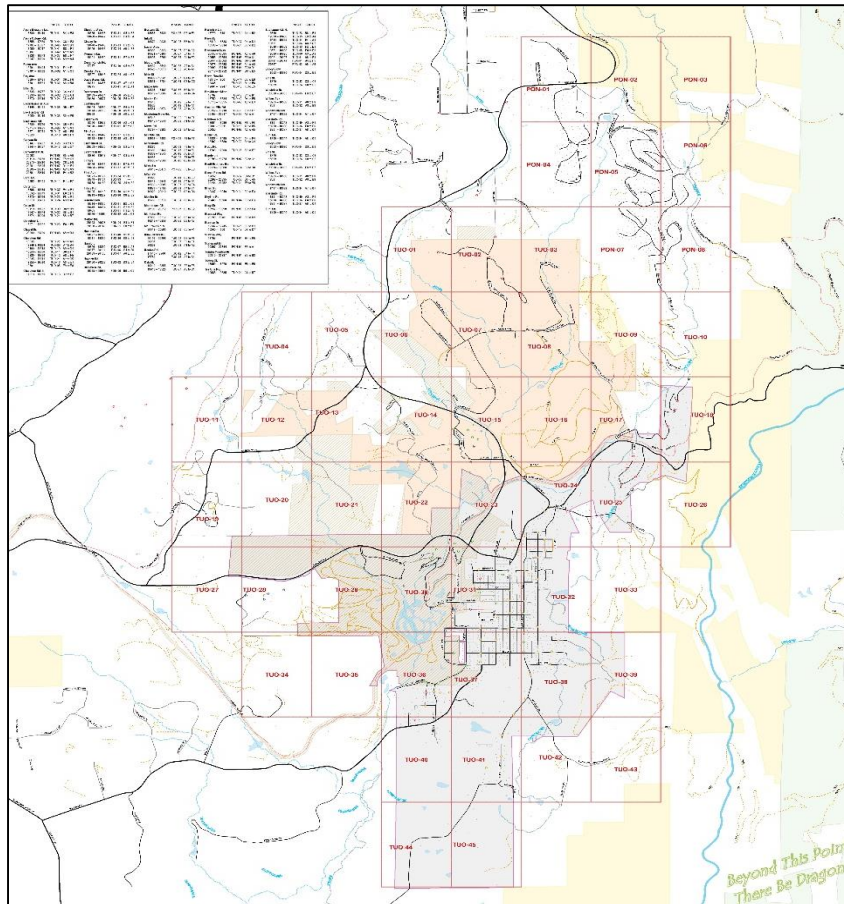
Emergency Incidents - Environmental





PUBLIC SAFETY

Emergency Response Maps & Map Book





IMPORTANCE OF GIS TO TRIBAL COMMUNITIES

- No matter your capacity, GIS is important
- GIS is still relatively new to tribes but can be accessed or developed for relatively free.
- GIS is an important tool to educate the tribal community visually about opportunities and constraints on tribal lands.



How to Develop a GIS Program

- Equipment and program purchase
 - How to find money
- Hiring GIS Specialist or train staff
 - Use of interns
- Understanding data management and how to protect information
 - Make sure you have backup
- Develop policies and procedures for
 - Creating maps
 - Where is data stored
 - Who has access
 - Which maps can be made public



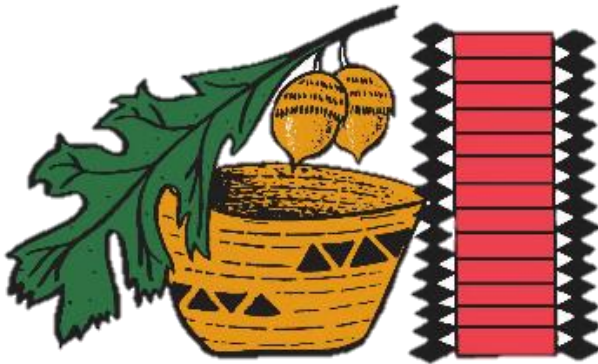
How to get Data

- Public information already out there
 - Federal agencies, State Agencies, Local government
- Current Projects in your area
 - Watershed, fuels reduction, emergency services
- Create your own
 - GPS
- Sharing of information
 - Educational institutions
 - Non-profits
 - Governmental agencies





THANK YOU!



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